| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| EXAMINER |
|---|
| STORM, DONALD L |

| ART UNIT | PAPER NUMBER |
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| 2654 | |

DATE MAILED: 04/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2"><br><br><br><b>Office Action Summary</b></td><td><b>Application No.</b><br><br>09/672,814</td><td><b>Applicant(s)</b><br><br>LIN ET AL.</td></tr>
<tr><td><b>Examiner</b><br><br>Donald L. Storm</td><td><b>Art Unit</b><br><br>2654</td><td></td></tr>
</table>

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *10 February 2003* .

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-21_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-21_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)　　　　4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)　　5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .　　6)☐ Other: .

## DETAILED ACTION

1.      The text of those sections of Title 35, U.S. Code not included in this action can be found in

a prior Office action.

### *Response to Amendment*

2.      The showing in AMENDMENT AND RESPONSE TO OFFICE ACTION filed February

10, 2003 (paper 6) responsive to the requirement to show common ownership at the time of

invention is acknowledged.

### *Specification*

3.      The specification is objected to because references to related applications should be

brought up to date if any of the applications have been abandoned or matured into patents, and as

appropriate, the application serial numbers or patent numbers should be included.  Including

current titles is encouraged.  See MPEP 608.01 SPECIFICATION.  Correction should be made

throughout the disclosure, for example:

        At page 1, line 7, patent number and title, probably --now US Patent 6,487,530-- could be

inserted.

4.      The Examiner notes, without objection, the possibility of informalities in the specification.

The specification has not been checked to the extent necessary to determine the presence of all

possible minor errors.  The Applicant's cooperation is requested to consider correcting minor

errors of which the Applicant may become aware during normal review and revision of the

disclosure.

        At page 6, line 11, should the word "systema" be --system--?

## *Claim Informalities*

5.      Claim 6 is objected to under 37 CFR 1.75(a) because the meaning of the phrase "said first set of word models" (line 3) needs clarification. Because no first set was previously said, it may be unclear as to what element this phrase is making reference. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to refer to the (first) set of user-independent word models.

6.      Claim 6 is objected to under 37 CFR 1.75(a) because the meaning of the phrase "said second set of word models" (line 5) needs clarification. Because no second set was previously said, it may be unclear as to what element this phrase is making reference. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to refer to the (second) set of user-dependent word models.

7.      Claim 21 is objected to under 37 CFR 1.75(a) because the meaning of the phrase "said second st" (lines 2-3) needs clarification. Because no second st was previously said, it may be unclear as to what element this phrase is making reference. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to be --said second set--.

8.      The Examiner notes, without objection, the possibility of informalities in the claims. The Applicant may wish to consider changes during normal review and revision of the disclosure.

        a.      In claim 2, line 1, should the phrase "recognition system recognition system" be -- recognition system--?

    b.      In claim 3, line 1, should the phrase "recognition system recognition system" be --

recognition system--?

    c.      In claim 5, line 1, should the phrase "recognition system recognition system" be --

recognition system--?

    d.      In claim 7, line 12, is the phrase "an other" as the Applicant intended?

### Claim Rejections - 35 USC § 102

#### Gould

9.     Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Gould et

al. [US Patent 5,920,837].

10.    Regarding claim 6, Gould [at column 86, lines 30-50]] describes operating a parallel SI

and SD embodiment recognizable as a whole to one versed in the art by explicitly describing the

following elements:

    providing a (first) set of word models including models for words [at column 5 lines 31-32,

as first set of phonetic word models];

    that are UI models derived from utterances of a plurality of speakers [at column 22,

lines 5-15, as models in a selected base vocabulary that reflects the speech of populations of

speakers ];

    second set of word models [at column 5, lines 32-34, as second set of custom word

models];

    that are UD models for ones of users [at column 13, lines 38-48, as models kept for a user];

that are each derived from utterances of one user [at column 44, lines 58-67, as models in

the user's file are customized to the user's own pronunciations];

the second set includes models for at least some of said words (having word models

included in the first UI set) [at column 5, lines 42-45, as each word model set defines a word

model for each of a common set of vocabulary words];

matching an utterance to one of the UI word models and matching an utterance to one of

the UD word models [at column 5, lines 45-48, as match a word signal against word models for a

given vocabulary word from each of the word model sets];

that is an utterance from one of the users [at column 12, lines 1-13, as an input utterance

word dictated by the user which leads to steps 223, 220, and 222];

that is another utterance from the same user [at column 18, lines 38-40, as the user has said

an utterance after steps 223, 220, and 222 are performed].


11.     Claim 1 sets forth limitations similar to claim 6.  Gould describes the limitations as

indicated there.  Gould also describes further additional limitations as follows:

speech recognition system [at column 10, lines 20-21, as apparatus for performing speech

recognition];

computer memory storing SI models (of the UI models), storing SD models (of the UD

models), and storing a program portion to identify by attempting the matching [at column 11,

lines 2-24, as hard disk and RAM with base vocabulary program, user's word model files, and

instructions used by the recognizer].

12.      Claim 2 sets forth limitations similar to claim 6. ·Gould describes the limitations as

indicated there. Gould also describes further additional limitations as follows:

storing SI models (of the UI models) and storing SD models [at column 11, lines 2-24, as

loading RAM with base vocabulary program and user's word model files].


13.      Regarding claim 4, Gould also describes:

upon a predetermined number of failures to recognize a word using word models [at

column 18, lines 1-column 18, line 9, as if tests fail indicating the word has no phonetic model or

if the token scores worse than an amount against a phonetic model, call the Train Word Model

subroutine];

from using the first set of word models [at column 5, lines 45-48, as match a word signal

against word models for a given vocabulary word from each of the word model sets];

inviting the particular user to speak training utterances of the word [at column 45, lines 37-

50, as Train Word prompts the user to say the word being trained a number of times];

deriving a word model from the training utterances [at column 17, lines 46-64, as Train

New Model makes an initial model for the word and updates it until optimum against the tokens];

storing it in the second set [at column 15, lines 16-20, as models derived from training are

in the user's file].


*Vysotsky*

14.      Claims 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by

Vysotsky et al [U. S. Patent 5,719,921] using the same rationale as in the prior Office action

(paper 4).

## *Claim Rejections - 35 USC § 103*

<u>*Vysotsky and Das*</u>

15.    Claims 3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Vysotsky</u>

et al. [U. S. Patent 5,719,921] in view of <u>Das</u> et al. [U. S. Patent No. 4,618,984], both already of

record.


16.    Regarding claim 3, <u>Vysotsky</u> [at abstract] describes a method, in a speech recognition

system, comprising:

storing a set of speaker-independent (SI) models [at column 6, lines 16-22, as speaker

independent templates stored in the recognizer];

of words [at column 7, lines 47-48, as whole word models as the basis for recognition];

the models used to match a word in an utterance of any user with a SI word model [at

column 8, lines 10-12, as likelihood of a match to a command, function, or service template];

a set of speaker-dependent (SD) models [at column 6, lines 5-6, as customer dependent

speech templates are retrieved to the speech recognizer];

that are word models [at column 7, lines 47-48, as whole word models as the basis for

recognition];

each (model) derived from speech of a particular user [at column 8, lines 56-59, as speaker

dependent model generation requires two repetitions by the customer];

storing the SD models [at column 6, lines 5-19, as speech recognizer array and database

with customer dependent templates];

recognizing words in the particular user's utterance is by attempting to match utterance

portions of an audio signal [at column 7, lines 26-49, as whole word or sub-word SD and SI

recognitions of processed, received speech];

matching an utterance from the particular user [at column 10, lines 59-61, as the

customer's speech input];

with word models among the SI set [at column 8, lines 10-12, as likelihood of a match to a

command, function, or service template];

with word models among the SD set [at column 10, lines 64-66 and column 8, lines 13-16,

as speaker dependent speech recognition (SDR) performed on the speech by speaker dependent

templates].

Vysotsky [at column 7, lines 51-53] also describes that training to create the recognition

models occurs prior to performing recognition; therefore, Vysotsky's description assumes that the

customer has registered templates and other information before the current session. Vysotsky

assumes the customer's registered information available in the database.

Vysotsky does not explicitly describe how to deal with a user whose information is not

available because the user is a customer for the first time. Vysotsky [at column 11, lines 65-67]

only describes that appropriate action is taken when a user cannot be recognized.

Das describes creating user dependent speech recognition models and describes a way to

interact with new user, including:

inviting a particular user to speak training words [at column 5, line 59, as prompting the

user to recite the utterance again];

for deriving a set of SD word models [at column 5, lines 60-62, as the stack vocabulary

item that matches the utterance];

upon the user's first use of the system [at column 3, lines 57-58, as a talker who is a subsequent talker];

deriving the set of SD models from training words[at column 5, lines 59-65, as the user provides a new appropriate prototype keyword candidate];

storing them [at column 5, lines 43-44, as inputs that fulfill a criteria replace the prototype].

Both Vysotsky and Das describe the user independent and user dependent speech recognition models. Das [at column 1, lines 18-20] also recognizes Vysotsky's postulate that utterance recognition systems require the prior establishment of speaker dependent vocabulary items for each speaker. Das [at column 2, lines 66-68], however, points out that there is an advantage to omitting vocabulary training under conditions when there are no recognition errors. It would have been obvious to one of ordinary skill in the art of speech recognition at the time that the invention was made to include Das's concept of inviting a new user to speak and register recognition models for misrecognized words in Vysotsky's recognition model enhancement method because Das [at column 3, lines 37-40] points out that this eliminates the need for establishing a vocabulary of speech recognition models for each talker.

17.     Regarding claim 7, Vysotsky [at abstract] describes a method, in a speech recognition system, comprising:

providing a set of user-independent (UI) models [at column 6, lines 16-22, as speaker independent templates stored in the recognizer];

of words [at column 7, lines 47-48, as whole word models as the basis for recognition];

the models derived from utterances of a plurality of speakers [at column 7, lines 57-59, as

utterances spoken by a plurality of individuals];

providing a set of user-dependent (UD) models for ones of a plurality of users [at column

6, lines 5-6, as customer dependent speech templates are retrieved to the speech recognizer];

that are word models [at column 7, lines 47-48, as whole word models as the basis for

recognition];

each (model) derived from utterances of one of the users [at column 8, lines 56-59, as

speaker dependent model generation requires two repetitions by the customer];

matching an utterance to one of the UI word models [at column 8, lines 10-12, as

likelihood of a match to a command, function, or service template];

for the utterance from one of the users [at column 6, lines 25-27, as speech to the

recognizer from the customer's speaking];

matching another utterance from the same user [at column 10, lines 59-61, as the

customer's additional speech input];

to one of the UD word models [at column 10, lines 64-66 and column 8, lines 13-16, as

speaker dependent speech recognition (SDR) performed on the speech by speaker dependent

templates].

Vysotsky [at column 7, lines 51-53] also describes that training to create the recognition

models occurs prior to performing recognition; therefore, Vysotsky's description assumes that the

customer has registered templates and other information before the current session. Vysotsky

assumes the customer's registered information available in the database.

Vysotsky does not explicitly describe how to deal with a user whose information is not available because the user is a new customer. Vysotsky [at column 11, lines 65-67] only describes that appropriate action is taken when a user cannot be recognized.

Das describes creating user dependent speech recognition models and describes a way to interact with new user, including:

inviting a user to speak training words [at column 5, line 59, as prompting the user to recite the utterance again];

who is a new user [at column 3, lines 57-58, as a talker who is a subsequent talker];

for deriving a set of UD word models [at column 5, lines 60-62, as the stack vocabulary item that matches the utterance];

deriving the set of UD models from training words[at column 5, lines 59-65, as the user provides a new appropriate prototype keyword candidate];

storing them [at column 5, lines 43-44, as inputs that fulfill a criteria replace the prototype].

Both Vysotsky and Das describe the user independent and user dependent speech recognition models. Das [at column 1, lines 18-20] also recognizes Vysotsky's postulate that utterance recognition systems require the prior establishment of speaker dependent vocabulary items for each speaker. Das [at column 2, lines 66-68], however, points out that there is an advantage to omitting vocabulary training under conditions when there are no recognition errors. It would have been obvious to one of ordinary skill in the art of speech recognition at the time that the invention was made to include Das's concept of inviting a new user to speak and register recognition models for misrecognized words in Vysotsky's recognition model enhancement

method because Das [at column 3, lines 37-40] points out that this eliminates the need for

establishing a vocabulary of speech recognition models for each talker.

18.     Claim 8 is set forth including the limitations of claim 7. Vysotsky and Das describe and

make obvious those limitations as indicated there.

Das also describes:

inviting a user to speak training utterances of a word [at column 5, lines 52-60, as

prompting the user to indicate which stacks vocabulary item was uttered, but unrecognized, and

prompting the user to recite the utterance again];

who is a new user [at column 3, lines 57-58, as a talker who is a subsequent talker];

upon a predetermined number of failures to identify the word among the UI models [at

column 5, lines 36-40, as when the prototype word is misrecognized, the system identifies the

misrecognition];

when no model for the word is present in the UD models[at column 5, lines 52-58, as the

word equivalent to the misrecognized utterance is not in the stack of vocabulary items choices

related to the words just before the mistake recognition];

deriving a word model for the training utterances [at column 5, lines 59-65, as the user

provides a new appropriate prototype keyword candidate];

storing it in the set of UD models [at column 5, lines 43-44, as inputs that fulfill a criteria

replace the prototype].

19.     Claim 9 is set forth including the limitations of claims 7-8. Vysotsky and Das describe and

make obvious those limitations as indicated there.

Vysotsky also describes:

the UD word models are stored in a separate memory location from the UI word models [at column 6, lines 16-19 and column 6, lines 1-3, as SI templates stored locally or in the data base and customer dependent templates in the database].

*Vysotsky and Salazar*

20.     Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vysotsky et al [U. S. Patent 5,719,921] in view of Salazar et al. [US Patent 5,774,841], both already of record.

21.     Regarding claim 5, Vysotsky [at abstract] describes a method, in a speech recognition system, comprising:

storing a set of speaker-independent (SI) models [at column 6, lines 16-22, as speaker independent templates stored in the recognizer];

of words [at column 7, lines 47-48, as whole word models as the basis for recognition];

the models used to match a word in an utterance of any user with a SI word model [at column 8, lines 10-12, as likelihood of a match to a command, function, or service template];

a set of speaker-dependent (SD) models [at column 6, lines 5-6, as customer dependent speech templates are retrieved to the speech recognizer];

that are word models [at column 7, lines 47-48, as whole word models as the basis for recognition];

each (model) derived from speech of a particular user [at column 8, lines 56-59, as speaker dependent model generation requires two repetitions by the customer];

storing the SD models [at column 6, lines 5-19, as speech recognizer array and database

with customer dependent templates];

recognizing words in the particular user's utterance is by attempting to match utterance

portions of an audio signal [at column 7, lines 26-49, as whole word or sub-word SD and SI

recognitions of processed, received speech];

matching an utterance from the particular user [at column 10, lines 59-61, as the

customer's speech input];

with word models among the SI set [at column 8, lines 10-12, as likelihood of a match to a

command, function, or service template];

with word models among the SD set [at column 10, lines 64-66 and column 8, lines 13-16,

as speaker dependent speech recognition (SDR) performed on the speech by speaker dependent

templates].

Vysotsky also describes:

determining a likelihood of recognizing a spoken word using the first set [at column 8,

lines 1-12, as indicate likelihood of a speaker independent match to a command, function, or

service template]; and

storing an adapted word model in the set of UD models [at column 5, lines 43-44, as inputs

that fulfill a criteria replace the prototype].

Part of Vysotsky's [at column 10, lines 7-9] arbitration process uses a measure of

confidence that the result returned by the SI recognition represents the spoken input. Vysotsky's

description assumes that the recognition result was recognized without difficulty because it is the

most likely match to the input. Since all of Vysotsky's training occurs at registration, Vysotsky

does not explicitly consider retraining the acoustic model if the recognition is returned with low

confidence. That is, <u>Vysotsky</u> does not explicitly describe using a marginally recognized spoken

word to derive a word model.

<u>Salazar</u> [at abstract] describes a method in a speech recognition system that also returns a

confidence measure of the recognition result, as does <u>Vysotsky</u>. <u>Salazar</u> also describes:

a spoken word marginally recognized [at column 14, line 50, as a word spoken recognized

with low confidence];

using the first set [at column 13, line 65, as compared to the vocabulary currently active];

and using that spoken word [at column 11, lines 41-42, as stored, raw digital voice from

spoken commands];

to derive a word model [at column 15, line 3, as adapt the word for the adaptation update];

and

storing it in the second set [at column 15, lines 3-9, as place the update in RAM, not in

permanent storage].

<u>Salazar</u> [at column 4, lines 1-34] points out that even though recognition results are

returned, the spoken input might have been a problem for the recognizer, and that retraining the

recognizer as-needed can reduce recognitions failures. In view of <u>Salazar</u>'s recognition of

problem words, but also with treatment to reduce problems with recognizing the word, it would

have been obvious to one of ordinary skill in the art of speech recognition at the time of invention

to include <u>Salazar</u>'s concept of retraining words that provide low-confidence recognition results

with <u>Vysotsky</u>'s system because provide current models of the word as spoken by the current user

to increase accurate recognition results.

### Vysotsky and Firman

22.    Claims 11 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Vysotsky et al [U. S. Patent 5,719,921] in view of Firman [US Patent 5,377,303] using the same

rationale as in the prior Office action (paper 4).

## Double Patenting

23.    The nonstatutory double patenting rejection is based on a judicially created doctrine

grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

harassment by multiple assignees.  See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir.

1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA

1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to

overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this

application.  See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal

disclaimer.  A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

24.    Claims 3 and 7 are rejected under the judicially created doctrine of obviousness-type

double patenting as being unpatentable over claims 2, 3, 7, and 8 of U.S. Patent No. 6,487,530.

Although the conflicting claims are not identical, they are not patentably distinct from each other

because a person of ordinary skill in the art would conclude that the invention defined in the claims in issue is an obvious variation of the invention defined in the claims in the patent.

25. Independent claims 3 and 7 of this application are not patentably distinct from claims 2 and 7, respectively, of Patent No. 6,487,530. The conflicting claims are set forth including obviously similar phrases.

However, claims 3 and 7 of this application do not explicitly include Patent No. 6,487,530's claimed limitations of at least an incoming signal, ascertaining a current context, attempting to identify words in the context by determining a probability, and taking appropriate action following comparison to a threshold, as recited in independent claim 1 and/or independent claim 6, and by dependency claims 2 and 7 of Patent No. 6,487,530.

It would have been obvious to one of ordinary skill in the art of computerized speech recognition at the time that the invention was made that claim limitations in Patent No. 6,487,530 claims differ from those in the application only by functions that can be eliminated if the effect of the additional functions is unneeded or undesired. If the functionality provided by the additional limitations is not desired, it would have been obvious to eliminate it, and so achieve the advantage of simplifying the processing.

26. Similarly, it would have been obvious that the separate memory storage provided by the dependent claims 3 and 8 of Patent No. 6,487,530 could not be included if this added functionality is not desired because eliminating the separate memories would further simplify processing.

## Response to Arguments

27.    The prior Office action, mailed October 3, 2002 (paper 4), objects to the claims, rejects

claims under *35 USC § 102* and *§ 103*, and provisionally rejects claims under the judicially created

doctrine of obviousness-type double patenting.  The Applicant's arguments and changes in

AMENDMENT AND RESPONSE TO OFFICE ACTION filed February 10, 2003 (paper 6) have

been fully considered with the following results.

28.    With respect to objection to those claims needing clarification, the changes entered by

amendment provide clear descriptions of the claimed subject matter.  Accordingly, the objection is

removed.

29.    With respect to rejection of claims 1, 2, and 6 under *35 USC § 102* and *35 USC 103*, citing

Vysotsky alone and in combination, the changes entered by amendment include a second set of

user-dependent models having models for at least some of the words that are also in a first set of

user-independent models.

The reference Vysotsky does not explicitly describe that limitation.  Accordingly, the

rejections are removed.  The Applicant's assertions with respect to Vysotsky have been

considered, but they are moot in view of the new claim element.

Please see new grounds of rejection applied to address the new claim element: a second set

of user-dependent models having models for at least some of the words that are also in a first set

of user-independent models.

30.    With respect to rejections of claims 10, 13, and 18 under *35 USC § 102* and *35 USC 103*,

citing <u>Vysotsky</u> alone and in combination, the Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that the claims each include some overlap in the

words or command that are modeled in the two sets of models.  This argument is not persuasive

because the features upon which the Applicant's argument relies are not recited in the rejected

claims.  Claims 10, 13, and 18 do not recite the limitation of a user-independent model and a user-

dependent model for the same word or command.  They are not restricted to the narrower

limitation on which the Applicant's arguments are based.  The claims indicate that a system

command, for which there is a SI model, executes when a SD model recognizes something in the

speech.  <u>Vysotsky</u> describes this as indicated in the prior Office action.  See <u>Vysotsky</u>'s [at

column 6, line 41-column 7, line 4] VOICE DIALING command which initiates performance

upon recognition of speech by <u>Vysotsky</u>'s SD models.

The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejections are maintained.


31.    With respect to rejection of claims 12, 16, and 21 under *35 USC § 102* and *35 USC 103*,

citing <u>Vysotsky</u> alone and in combination,  the Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that the recognition pass that is performed in

maintenance mode is not a comparison to both SI and SD models.  This argument is not

persuasive because all of <u>Vysotsky</u>'s descriptions of speech recognition include performing SI and

SD comparisons in parallel.  In the cited sections of <u>Vysotsky</u>, the training process includes

performing recognition.  When <u>Vysotsky</u> describes recognition passes, they include parallel

comparison to both SI and SD models.  <u>Vysotsky</u> does not describe bypassing or forgoing the SI

recognition during the maintenance mode, in which training occurs. Vysotsky's recognition always compares the SI and SD models; see SDR/SIR/RESULT outcome matrix at column 9, lines 30-50.

The Applicant's arguments have been fully considered but they are not persuasive. Accordingly, the rejection is maintained.

32.   With respect to rejection of claims 3 and 7 under *35 USC § 103*, citing Das in combination, the Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that Das's subsequent talker, who did not prepare the SI models, does not qualify as a new user or first-time user, because the subsequent talker has already uttered a statement that was not recognized. If this is the intended argument, it is not persuasive because the features upon which this argument relies are not recited in the rejected claims. Das's talker who did not prepare the prototypes meets the criteria for a new user, as claimed. The claims do not require that a first time user be prompted before speaking and prepare SD code patterns before speaking. Neither the claims of the application, nor the specification, nor Das is restricted to some narrower interpretation of a new user on which the Applicant's arguments appear to be based.

Although the citation at column 2 points out that the subsequent talker is not required to recite each vocabulary item for training it, that same citation points out that the subsequent talker will train other vocabulary items.

The Applicant's arguments have been fully considered but they are not persuasive. Accordingly, the rejections are maintained.

33.     With respect to rejection of claims 4 and 8 under *35 USC § 103*, citing Das in combination,

the Applicant's arguments appear to be as follows:

a.      The Applicant's argument appears to be that one failure does not qualify as a

predetermined number after which number (one) of failures, training is caused to occur. This

argument is not persuasive because Das's predetermined number of failures is one failure. If this

is the intended argument, it is not persuasive because Das [at column 5, lines 36-40] describes the

predetermined number of failures as whenever a misrecognition occurs.

b.      The Applicant's argument appears to be that for matching some input Das's

recognition does not use either UI or does not use UD models. This argument is not persuasive

because Das's recognition and stack of choices use both UI and UD models. Das compares both

(1) remaining prototypes and (2) code patterns that were previously retrained, now replacing their

corresponding prototypes. Here no matching model is found in the currently active UD models.

No match is found in the remaining UI models either.

The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejections are maintained.


34.     With respect to rejection of claim 5 under *35 USC § 103*, citing Vysotsky in combination

with Salazar, the Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that Vysotsky does not describe all of the

limitations of the claim, and Salazar does not describe all of the limitations of the claim because

Salazar does not explicitly describe a SI vocabulary for the currently active vocabulary . This

argument is not persuasive because one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. Vysotsky and Salazar

combine to teach that an SI vocabulary is active and that confidence measures can by used to

determine retraining, as well as to determine initial training. See the rejection of claim 5 where

the claim elements are enumerated, for example. The question is not simply whether either cited

reference suggests within its four corners using the other reference's disclosed subject matter, but

rather what they suggest as a whole to one versed in the art.

The citation at columns 14-15 points out more than threshold adaptation. That same

citation points vocabulary template adaptation.

The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejection is maintained.


35.     With respect to rejection of claims 15 and 20 under *35 USC § 103*, citing Firman in

combination, the Applicant's arguments appear to be as follows:

The Applicant's argument appears to be that the claim language "utterances in place of

system commands" should be interpreted as requiring that each "in-place-of" utterance must differ

from the corresponding command name of the system command. This argument is not persuasive

because the features upon which the Applicant's argument relies are not recited in the rejected

claims. Neither the claims of the application nor Firman is restricted to the narrower

interpretation on which the Applicant's arguments are based. The claims do not require a

difference and the claims are not limited by the system command name.

· The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejection is maintained.

36.     With respect to provisional rejection of claims 1, 2, 4, and 6 under the judicially created

doctrine of obviousness-type double patenting, the changes entered by amendment include a

second set of user-dependent models having models for at least some of the words that are also in

a first set of user-independent models.

US Patent 6, 487,530, issued for Application Number 09/28,078, does not claim that

limitation. Accordingly, the provisional rejections are removed. The Applicant's assertions with

respect to US Patent 6,487,530 have been considered, but they are moot in view of the new claim

element.

37.     With respect to provisional rejection of claims 3 and 7 under the judicially created doctrine

of obviousness-type double patenting, Application Number 09/281,078 issued as US Patent

6,487,530 on November 26, 2002. Accordingly, the provisional rejections are removed. Please

see new grounds of rejection.

### *Conclusion*

38.     The following references made of record and not relied upon are considered pertinent to

applicant's disclosure:

Kuriki [US Patent 5,144,672] describes storing word models in SI and SD dictionaries for speech

recognition matching to words stored in each dictionary.

39.     Applicant's amendment necessitated the new ground(s) of rejection presented in this Office

action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to

37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

40.     Any response to this action should be mailed to:

> **Box AF**
> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

**or faxed to:**

> (703) 872-9314, (for formal communications; please mark "EXPEDITED
> PROCEDURE")

**Or:**

> (703) 872-9314, (for informal or draft communications, and please label
> "PROPOSED" or "DRAFT")

> Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
> Arlington, VA, Sixth Floor (Receptionist).

41.     Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is

(703)305-3941. The examiner can normally be reached on weekdays between 8:00 AM and 4:30

PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Marsha D. Banks-Harold can be reached on (703)305-4379. Any inquiry

of a general nature or relating to the status of this application or proceeding should be directed to

the Technology Center 2600 Customer Service Office at telephone number (703)306-0377.


*Marsha D Banks-Harold*
**MARSHA D. BANKS-HAROLD**
**SUPERVISORY PATENT EXAMINER**
**TECHNOLOGY CENTER 2600**

Donald L. Storm
April 10, 2003